

REMARKS/ARGUMENTS

1. Claim Rejections – 35 U.S.C. § 103 (a)

Claims 2, 4-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kuehnel (2004/0202148) and Li et al. (20040213205). Applicant has further amended Claim 2 to overcome the rejection. As amended, the present invention encapsulates the time slots in a data frame adjusted to be transferred in the packet switched network. The reference Kuehnel is silent with respect to the use of time slots as a means of transferring data and Li merely disclose elements chosen in hindsight without regard to how the reference works in combination with Kuehnel.

Kuehnel teaches another means of transporting streaming data over MPLS. In that invention, incoming data is multiplexed to generate a single data stream. A composite data stream is then generated by selectively combining certain packets of the single data stream with an IP header or generating new packets with a full IP header at a predetermined timing interval, and then transmitting it to a first MPLS converter that assigns a MPLS label to data packets in the composite data stream using information from the IP header. The composite data stream is then transported and routed to a second MPLS converter, via a MPLS network, that strips the MPLS labels from the data packets. A discriminator separates the stripped, combined data stream into non-IP header data output via a demultiplexer to generate multiple outgoing data streams, and IP header data output to a traffic monitor that controls said routing mechanism.

In contrast, in the present invention an inner MPLS label is used to address a unique PCM system and an outer MPLS label is used to identify the fixed path. The Examiner equates this structure to Kuehnel's multiplexed packet data stream (composite data stream) that is give a single MPLS label, not an inner and then outer label. The Examiner refers to Fig. 4B element S15. It is described as follows:

In further steps S15a, S15b, respectively, the IP header 5 is sent to the traffic monitor 37 as a feedback information for setting the predetermined interval of the routing mechanism 25 that generates the

routing information, and the non-IP traffic is sent to the de-multiplexer 39, which generates streams of output data 41 in the native format.

There is nothing in element S15B that is remotely similar to the present invention. The Examiner further refers to paragraphs [0011] and [0045] wherein he equates a first packet reference numeral 5 with the inner MPLS label of the present invention and paragraph [0008] as being equivalent to the outer MPLS label of the present invention. The paragraphs/elements to which the Examiner points are not remotely similar to the present invention:

Kuenhel: Inner MPLS Label:

[0011] If packetized streaming data is transported over an MPLS network in a traditional way, a certain amount of streaming data is buffered, packetized and encapsulated as an IP-packet. Upon entering the MPLS network, a label that references the path through the MPLS network corresponds to the IP-address information and is added. The mapping between destination or a group of destinations and the label can be done statically or dynamically using a control protocol like the prior art Label Distribution Protocol (LDP). A destination or a group of destinations are identified by their respective IP-addresses.

The foregoing has been reference in the background of the present application -- an IP packet that is given an MPLS label when entering the MPLS network. No distinction is made of it being an inner label or outer label in the foregoing.

[0045] Then, in a next step S5, the IP packets 5 are selectively inserted by multiplexing with the single data stream at the second multiplexer 27. In a further step S7, the above-described composite stream output from the second multiplexer 27 is passed to the first MPLS converter 29, and a label 7 is assigned to each incoming packet 1, 9. The incoming packets having a label 7 and an IP header 5 are full IP packets, and the intervening incoming packets not having IP headers are stream data packets 9. At this point, the data structure illustrated in FIG. 1 has been generated. A label 7 is attached to all data (including IP and non-IP). The IP routing packet 5 has a header that acts as a "dummy" header to essentially set up the label switched path throughout the MPLS network

for the combined data stream. As noted above, the attachment of the label 7 enables the MPLS network to transport the non-IP data as if it were IP data on a previously established label switched path.

This again is referred to in the background of the present application -- an IP packet that is given an MPLS label when entering the MPLS network. No distinction is made of it being an inner label or outer label in the foregoing.

Kuenhel-Outer MPLS Label:

[0008] As a consequence, AIM is widely deployed in today's networks that support voice and data transport alike. However, the connection control mechanisms to setup and release connections were derived from the telephony system, and have a disadvantage in that they do not scale for the kind of data traffic generated by the Internet. New connection control technologies like the prior art MPLS (Multiprotocol Label Switching) were introduced to facilitate transport of Internet packet data over an ATM network. MPLS combines the Internet protocol (IP) with a connection-oriented transport bearer (e.g., ATM). Internet protocol data units (IP-PDUs) travel along predetermined paths, which are statically set up between an ingress and egress point of the MPLS network. A label is assigned to the packet based on address information contained in the packet header. The label identifies the path throughout the network. Such a label-switched path (LSP) provides the conduit for all IPPDUs regardless of the logical connection traversing the network between a given pair of nodes (i.e., ingress node and egress node). A special treatment in terms of Quality of Service (QoS) can be applied to LSPs.

This again is referred to in the background of the present application-- an IP packet that is given an MPLS label when entering the MPLS network. No distinction is made of it being an inner label or outer label in the foregoing.

The Examiner then states that Kuehnel doesn't teach to use TDM as transmission protocol, but Li teaches use TDM to divide data into slots ([0029]) and how to transfer these slots into PCM system (Fig. 3, [0007]). Thus, he states, it would have been obvious for one of ordinary skill in the art to implement Li into Kuehnel, since both arts are in the same field of endeavor and Kuehnel teaches an MPLS method to tunnel the data with a fixed path (which, as noted above, does not disclose the present

invention), and Li suggests a TDM transmission protocol into a PCM transmission link. He concludes: The reason to combine is TDM protocol is well know in the art, thus tunneling method (MPLE) can be apply to any transmission protocols such as CDMA, OFDM, TDM etc.

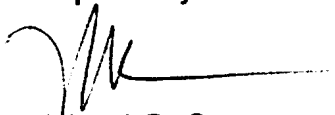
Clearly, the present application has been used as a blueprint to pick and choose elements, using hindsight, to obtain the present invention. There is no rationale way to map elements of Li to those of Kuehnel without undertaking a substantial reconfiguration of the Kuehnel reference. Hence, not only does Kuehnel not disclose the elements the Examiner says it does, Li only superficially discloses some of those elements, and it is not technically possible to reconcile Li with Kuehnel.

CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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